

R E P O R T

STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

CABRILLO POWER I LLC

Prepared for:



CABRILLO POWER I LLC
ENCINA POWER STATION
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Revision: December 2010



E2 Project Number: 10-023-001

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FOREWORD

In November 1990, the United States Environmental Protection Agency (EPA) published final regulations that establish application requirements for storm water permits. The primary emphasis of these National Pollutant Discharge Elimination System (NPDES) storm water regulations is pollution prevention. As a result, the concept of the Storm Water Pollution Prevention Plan (SWPPP) was developed and became an integral requirement of the Industrial Activities Storm Water General Permit, which was adopted by the California State Water Resources Control Board (SWRCB). On April 17, 1997, the SWRCB adopted a revised Industrial Activities Storm Water Permit, which replaced the expired 1990 permit (see Appendix C). The revised permit incorporates several additional components and contains some deletions to the previously existing permit. These revisions are reflected in this document.

The overall objective of this SWPPP is to:

- **Identify sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges; and**
- **Implement practices to reduce or prevent pollutants in storm water discharges.**

Elements of this SWPPP include a topographic map of the general vicinity around the site, a site plan, a description of activities that may affect storm water quality, a significant materials inventory, potential pollutant pathway identification, and a summary of pollutant spills.

The practices used to reduce or eliminate pollutants in storm water include identification of SWPPP personnel responsible for developing, implementing and revising this Plan, preventive maintenance and inspections, good housekeeping, spill prevention and response, and storm water management practices including structural and nonstructural controls for minimizing storm water contamination, sediment and erosion control, employee training, and inspections.

STATEMENT OF COMPANY POLICY

It is the intent and desire of Cabrillo Power I LLC to comply with all laws and regulations. To that end, the company will do its part to protect and improve the environment by providing an atmosphere of cooperation, the physical resources necessary to develop and implement a comprehensive SWPPP and the leadership to get the job done properly.

The company will evaluate potential sources of storm water pollution from the Encina Power Station facility and undertake efforts to control or eliminate them. If the company is unable to totally eliminate the pollutant, then the company will make every effort to control the pollutant and mitigate its effect on the environment. Implementation of this SWPPP is designed to achieve this goal and will be updated periodically as the need arises.

Cabrillo Power I LLC recognizes that to achieve these goals, a partnership must be formed with all parties involved: the government, the company, and the employees. The employees of this company are encouraged to provide input to the pollution prevention efforts in this plan and are encouraged to notify their supervisor or Station management to report potential instances of noncompliance.

STORM WATER POLLUTION PREVENTION PLAN
CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Certified By:

Cabrillo Power I LLC
By: NRG Cabrillo Operations Inc.
It's Authorized Agent

By: _____ Date: _____
Jerry L. Carter
Plant Manager

**STORM WATER POLLUTION PREVENTION PLAN TEAM
PRINCIPAL CONTACTS LIST ENCINA POWER STATION**

Plant Manager	Jerry L. Carter (760) 268-4011
Operations & Maintenance Manager	Robert Stahl (760) 268-4093 Shawn Reilly (760) 268-4012
Technical Manager (Storm Water Compliance Coordinator)	Dan Bergeron (760) 268-4015
Environmental Specialist	Sheila Henika (760) 268-4018
Environmental Specialist.....	Brian Yim (760) 268-4020
Laboratory Supervisor/ Fueling Administrator	Pedro Lopez (760) 268-4070

SECTION 1 STORM WATER POLLUTION PREVENTION PLAN

This Storm Water Pollution Prevention Plan (SWPPP) was developed to allow Cabrillo Power I LLC to minimize the potential discharge of pollutants in storm water discharges from the Cabrillo Power I LLC Encina Power Station facility, to consolidate information provided in the permit application, and to ensure compliance with the terms and conditions of the April 1997 National Pollutant Discharge Elimination System (NPDES) storm water permit issued by the State Water Resources Control Board (SWRCB) (97-03-WQ/ CAS000001: Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities [i.e., "General Permit"]; see Appendix D).

This SWPPP has been specifically designed to parallel and otherwise reflect the content and structure of the General Permit. This structure is preferred so that all elements mandated by the General Permit are covered, and that ease of assessing plan compliance is assured. This SWPPP identifies potential sources of pollution that may affect the quality of storm water discharges associated with industrial activity at the site, and presents the management practices that will be used at Cabrillo Power I LLC's Encina Power Station facility for reducing pollutants in storm water discharges. Industrial activities that are subject to the general industrial storm water regulations include the following:

"... industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or byproducts used or created by the facility; material handling sites; refuse sites, sites used for the application or disposal of process wastewaters; sites used for the storage and maintenance of material-handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water."

Sources of information used to assist with the development of this SWPPP include the following:

- SWRQB Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements (WDR) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, April 17, 1997.

- Guidance Manual for the Preparation of NPDES Permit Applications for Storm-Water Discharges Associated with Industrial Activity
- 40 Code of Federal Regulations (CFR) Part 122 (Final Rule)
- U.S. Environmental Protection Agency (EPA) storm water hotline: 1-703-821-4823
- In accordance with §A.10 of the General Permit, the following general requirements apply to all facilities that are required to maintain SWPPPs:
- The SWPPP must be retained onsite and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) that receives the storm water discharges.
- The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements outlined in the General Permit. As requested by the Regional Water Board and/or local agency, the facility operator must submit a SWPPP revision and implementation schedule that meets the minimum requirements of the General Permit to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator must provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.
- The SWPPP must be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- Other than as provided in the General Permit, the SWPPP must be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of the General Permit.
- When any part of the SWPPP is infeasible to implement by the deadlines specified in the General Permit due to proposed significant structural changes, the facility operator must submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides

justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the Best Management Practices (BMPs) that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators must provide written notification of the Regional Water Board within 14 days after the SWPPP revisions are implemented.

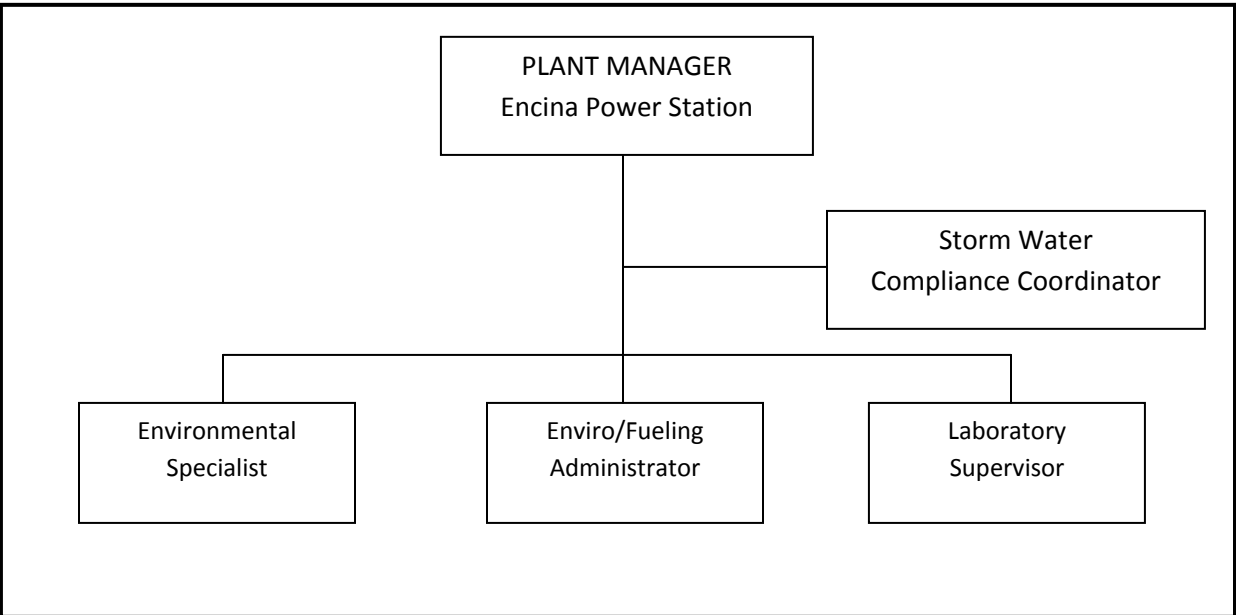
- The SWPPP must be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that must be available to the public by the Regional Water Board under Section 308 (b) of the Clean Water Act.

1.1 COMPANY MANAGEMENT AND ORGANIZATION

The following discussion provides a perspective on the responsibilities and organization of the personnel associated with the Storm Water Pollution Prevention Team.

Pollution Prevention Team

In accordance with the requirements of the General Permit, a Storm Water Pollution Prevention Team has been organized at Encina Power Station facility to assist in development, implementation and revision of this SWPPP and to conduct all monitoring program activities required by the General Permit. These positions and their responsibilities are shown and described below. Refer to the list of principal contacts at the front of this document for specific personnel assigned to these positions.



- Review of public and private records of current and historical land use
- Review for prior releases of hazardous materials
- Environmental database search
- Review of relevant files of federal, state, and local agencies as appropriate
- Visual survey of the subject Site and adjacent properties
- Review of historical aerial photographs
- Interviews with current and previous owners and operators
- Review of regulatory correspondence and environmental reports
- Report preparation

The above information was collected and evaluated and is included in this report, which summarizes our findings, opinions and conclusions.

- **The Plant Manager – Encina Power Station** will be responsible for signing the Annual Report and certifying that the elements of this plan are being implemented.
- **The Storm Water Compliance Coordinator** will be responsible for recommending revisions and updates to the SWPPP to assure compliance. He/she will also assist in updating this plan as appropriate based on team recommendations.
- **The Fueling Administrator** will be responsible for assigning respective staff members specific responsibilities for prevention of storm water pollution and provide quality assurance (QA) that implementation is carried through for all fueling shipments and transfers.
- **The Environmental Specialist** will be responsible for planning and scheduling staff training and implementation programs in accordance with this plan. He/she will be responsible for instructing and assuring their respective staff members operate and maintain the facility in a storm water-sensitive manner to continually assure compliance with this SWPPP. He/she will also coordinate indoctrination and orientation of new facility employees such that all onsite employees are consistently educated in storm water pollution awareness. He/she will assure that shipping, receiving, storage, and potential spillage of significant materials are continually safeguarded against storm water pollution.
- **The Laboratory Supervisor** will be responsible for conducting observations and sampling in accordance with this Plan, for performing laboratory analyses of the samples collected, and preparing the Annual Report. He/she will also be responsible for archiving all data and support information collected, as well as completion of the Annual Compliance Evaluation report.

The above personnel will receive training for each of their specific responsibilities in storm water pollution prevention in accordance with Cabrillo Power I LLC standard practice. These persons will then assure that remaining site personnel are educated regarding proper work practices and management techniques to mitigate pollutant exposure to storm water flows. Refresher training for site personnel will be conducted annually so that proper implementation of the SWPPP can be assured prior to the onset of seasonal rainfall. Specific responsibilities will be in accordance with those specified in Table 1.

1.2 FACILITY DESCRIPTION

Regional Setting and Site Map

The Encina Power Station facility of Cabrillo Power I LLC is located in the northwest area of San Diego County, California. The facility is located in township 11 south and range 4 west in the San Luis Rey quadrangle as shown in Figure 1. The facility is located north of the intersection of Cannon Road and Carlsbad Boulevard and encompasses approximately 130 acres (Figure 1; Figure 2).

The Encina Power Station produces electricity utilizing natural gas and residual fuel oil as fuel, and is classified by Standard Industrial Classification (SIC) code 4911: "Steam Electric Generating Facilities."

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**Table 1
Storm Water/Non-Storm Water Monitoring Responsibilities**

MONTH	ACTIVITY	RESPONSIBLE PERSON*	LOG FORM**
January	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (January, February <u>or</u> March). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS	VI V VI
February	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (January, February <u>or</u> March). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS	VI V VI
March	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (January, February <u>or</u> March). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS	VI V VI
April	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (April, May <u>or</u> June). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS	VI V VI
May	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (April, May <u>or</u> June). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. Conduct annual site inspection. Schedule and conduct annual comprehensive evaluation. Review and revise SWPPP, as appropriate. Prepare Annual Report 	LS LS LS LS LS/SWCC SWPPT LS/SWCC	VI V VI I III/VIII II NA

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Table 1
Storm Water/Non-Storm Water Monitoring Responsibilities (continued)

MONTH	ACTIVITY	RESPONSIBLE PERSON*	LOG FORM**
June	<i>Beginning of dry season.</i> <ul style="list-style-type: none"> Non-storm water discharge visual observations once per quarter (April, May <u>or</u> June). Submit Annual Report to RWQCB by <u>July 1</u> each year 	LS LS/SWCC	V I – VIII
July	<ul style="list-style-type: none"> Non-storm water discharge visual observations once per quarter (July, August <u>or</u> September). 	LS	V
August	<ul style="list-style-type: none"> Non-storm water discharge visual observations once per quarter (July, August <u>or</u> September). 	LS	V
September	<ul style="list-style-type: none"> Non-storm water discharge visual observations once per quarter (July, August <u>or</u> September). 	LS	V
October	<i>Beginning of wet season.</i> <ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (October, November <u>or</u> December). Water samples collected from <u>all</u> identified outfalls during first hour of <i>first</i> storm event of wet season. Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season. 	LS LS LS LS	VI V VI VI
November	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (October, November <u>or</u> December). Water samples collected from <u>all</u> identified outfalls during first hour of <i>first</i> storm event of wet season, if not already collected. Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS LS	VI V VI VI
December	<ul style="list-style-type: none"> Wet season visual observations once per month during first hour of storm. Non-storm water discharge visual observations once per quarter (October, November <u>or</u> December). Water samples collected from <u>all</u> identified outfalls during first hour of <i>second</i> storm event of wet season, if not already collected. 	LS LS LS	VI V VI

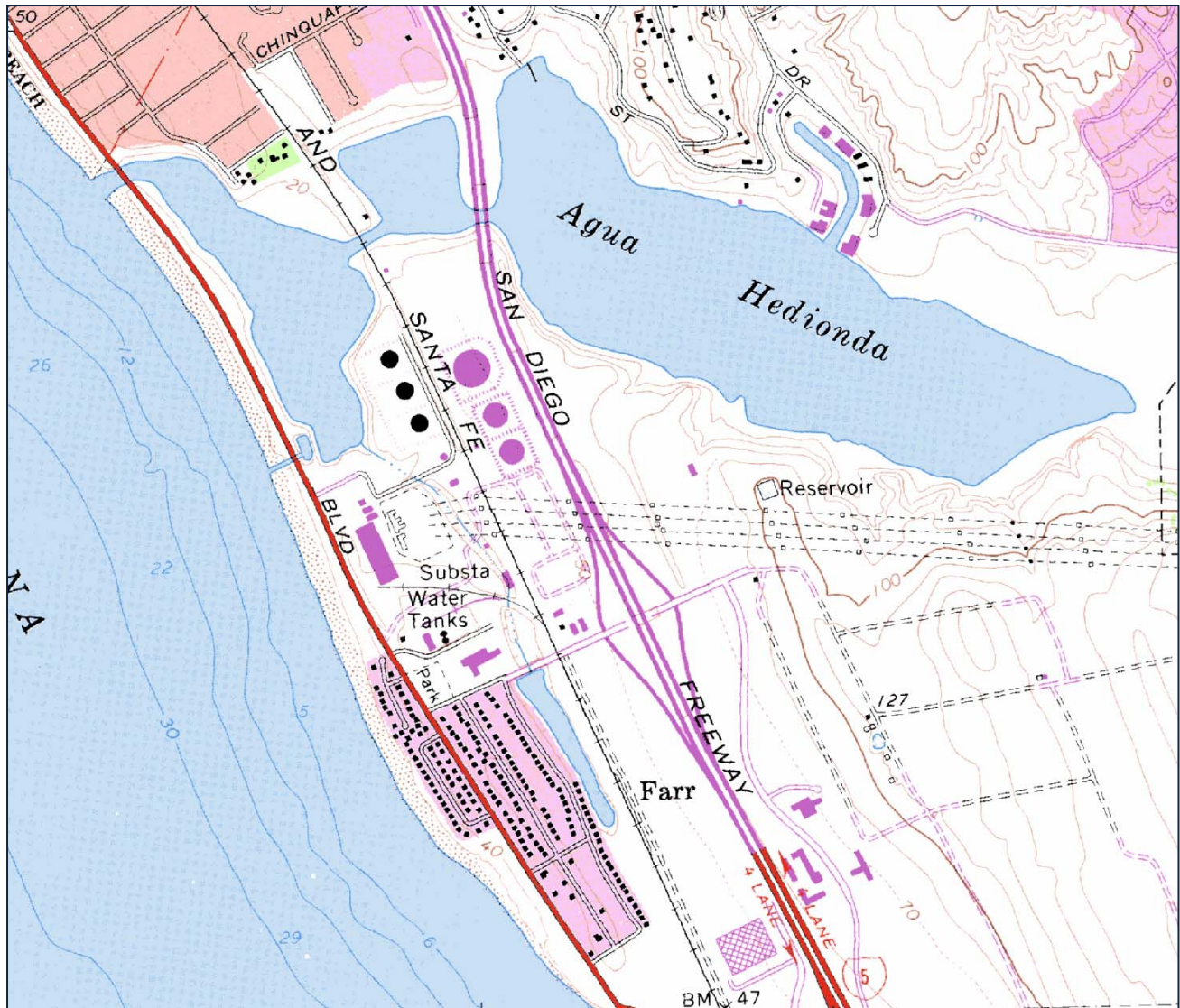
* LS: Laboratory Supervisor

SWCC: Storm Water Compliance Coordinator

SWPPT: Storm Water Pollution Prevention Team

** These forms or other appropriate forms may be used

Figure 1. Location of Encina Power Station Facility, Cabrillo Power I LLC



San Luis Rey, Calif. NE/4 Oceanside 15' Quadrangle

N3307.5 – W11715/7.5 1968 Photo revised 1975

AMS 2550 III NE – Series V895

United States Geological Service

Figure 2. Encina Power Station SWPPP Site Layout Plan, Cabrillo Power I LLC

SEE FULL SCALE DRAWING INCLUDED AS APPENDIX E

A total of five steam turbine generator units operate at the plant producing a total of 950 megawatts (MW) of electrical energy. Each turbine generator is driven by superheated steam produced in boilers through the burning of natural gas or residual fuel oil. Natural gas is supplied by two gas runs with pressure regulating stations located northeast and southeast of the Power Station. Residual fuel oil is supplied to the Power Station from seven aboveground storage tanks (ASTs) that have floating roofs. The tanks range in capacity from 126,000 to 450,000 barrels (bbls). Maximum storage capacity of these tanks is 1.7 million bbls. The electrical generators are cooled with 98 percent pure hydrogen gas for more efficient cooling. Also on site is a 20 MW gas turbine which burns natural gas or diesel oil. This unit was installed for “black starts” and may be used for power generation.

Wastewater generated at the plant is routed through wastewater treatment facilities (WWTF) located east of the plant and is treated as required and tested prior to discharge.

The main transformers and auxiliary transformers for the steam generating units are located immediately east of the Power Station building. East of the Power Station is a 138-kilovolt (kV) and 230 kV switch yard. All the transformers and oil circuit breakers contain non-polychlorinated biphenyl (PCB) insulating oil.

Two lessees occupy portions of the Encina Power Station site. Poseidon Resources utilizes a portion of the west parking lot for a pilot desalination plant. Carlsbad Aquafarm (CA) utilizes the northern shore of the Power Station discharge pond and a 5-acre area of the outer Agua Hedionda Lagoon for aquaculture and processing.

Climate

The Encina Power Station area is characterized as an arid climate with warm, dry summers and mild winters. Winter precipitation in the area is associated with storms migrating inland from the Pacific Ocean. Nearly 90 percent of the annual rainfall occurs during the period from November to April with a mean annual rainfall of about 9 inches (NOAA, 1991).

Topography and Drainage

The topography of the site is moderate to flat and generally slopes west toward Carlsbad Boulevard and the Pacific Ocean. As indicated by earlier storm water investigations at the Encina Power Station (Geocon Environmental Consultants Inc.[Geocon], 1992), the Encina facility contains six different surface drainage basins (Figure 2). These drainage basins are described as follows:

Basin A: Fuel Oil Tank Nos. 4, 5, 6, 7 and adjacent access road, vacant land, and storage areas located in the north east corner of the site.

- Basin B:** Vacant storage area, switching yard, paved areas, waste water treatment facility, dredge equipment, reverse osmosis, machine shop, and hazardous materials storage area.
- Basin C:** Fuel Oil Tank Nos. 1, 2 and 3.
- Basin D:** Power Station, gas turbine, main transformers, paint booth, and sodium hypochlorite tanks, sulfuric acid and sodium hydroxide tanks.
- Basin E:** Employee parking area, administrative buildings and maintenance building.
- Basin F:** Dredge dock, access road to dock structure at Carlsbad Aquafarm, and Poseidon Resources pilot desalination plant.

The amount of impervious surface (e.g., paved surfaces, structures) on this site is approximately 10 percent (Geocon, 1992). The balance of the site consists of planted landscaping, natural vegetation, and evaporation or retention areas. During periods of rain, storm water runoff is generally diverted by surface gradients and curbing to storm water inlets and drainage channels located throughout the site. The nearest surface water bodies to the Encina Power Station facility are the Pacific Ocean directly to the west and the Agua Hedionda Lagoon directly to the north.

There are several storm water conveyance and discharge structures located on the site. These include sumps, pump pits, swales and ditches, all of which are depicted in Figure 2. In addition to conveyance systems for storm water that originates onsite, a 96-inch storm drain pipe that discharges to the Agua Hedionda lagoon at the north end of the site from the west side of Basin B contains flow from offsite sources in the Carlsbad area. Facility personnel have observed flow in this pipe all year round. In addition to surface and subsurface drains, throughout the site, multiple roof drains divert storm water to the ground surface, which then follows the local topography generally leading toward Carlsbad Boulevard.

Security

The Encina Power Station facility is completely surrounded with fencing, excluding lagoon waterfront. Cabrillo Power I LLC maintains a security force at the Power Station so that a pair of security guards is onsite 24 hours per day. A guard station is located at the main entrance to the facility. One of the guard pair patrols the Power Station facility during traditional non-business hours. All valves used to drain tank retention areas and sumps are locked in the closed position when not in use. Only trained operators or supervisors have the authority to unlock and open drain valves and operate sump pumps. All outside areas are lighted during the night. Visitors are required to check in at the main entrance before clearance can be given for site visitation.

1.3 SIGNIFICANT MATERIALS

There are a number of "significant materials"¹ used at the Encina Power Station facility that have the potential to be exposed to precipitation. "Significant materials" include metallic products, and any chemical the facility is required to report under Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA) that have the potential to be released with storm water discharges. These commonly include stored metal parts, cutting/lubricating oils, water softening/treating chemicals, paints, and metal shaving waste.

In accordance with §A.5 of the General Permit, detailed information regarding the significant materials handled and/or stored at the Encina Power Station facility is provided Table 2. It should be noted that significant materials used at the Power Station are expendable and are consumed onsite. In this regard, there is no offsite shipping of significant materials, incoming shipments serve to restore inventories as materials are used or otherwise consumed.

¹ 1 The 1997 General Permit defines significant materials as including but not limited to "raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101 (14) of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges".

Table 2. Significant Materials Handled and Stored at the Encina Power Station Facility

Material	Receiving Location	Handling Location	Storage Location	Quantity/Capacity
Fuel Oil	Fuel tanks (Basin A and C)	Burned in Power Station boilers to produce steam	East/West Tank Farms	Tank 1-3: 126,400 bbls Tank 4-5: 241,300 bbls Tank 6: 413,200 bbls Tank 7: 421,200 bbls
Displacement Oil (diesel / fuel oil mix)	Displacement oil tank (Basin B)	Used for fuel oil line purges and cutter stock	West Tank Farm	8,100-bbl tank
Natural Gas	Pumped to facility through one 10" main and one 20" main	Burned in Power Station to produce steam	N/A (pressurized pipelines on and off site)	Boiler 1: 1.2 mmcf/hr Boiler 2: 2.2 mmcf/hr Boiler 3: 1.2 mmcf/hr Boiler 4: 3.0 mmcf/hr Boiler 5: 3.0 mmcf/hr
Liquid Caustic Soda	East of Unit 4 and at Wastewater Treatment Facility (WWTF) (Basin B and D)	Unit 4 basement and WWTF	East of Unit 4 and at WWTF	Unit 4 area: 6,000 gal. WWTF: 4,000 gal.
Liquid Sulfuric Acid	East of Unit 4 and at WWTF (Basin B and D)	Unit 4 basement and WWTF	East of Unit 4 and west side of WWTF	Unit 4 area: 6,000 gal. WWTF: 900 gal.
Fuel Oil Additive (Calcium nitrate)	East side of Unit 5 (Basin D)	East side of Unit 5	East side of Unit 5	6,000-gallon tank
Lubricating Oils	Hazmat storage area (Basin B)	Various locations inside and outside the plant	Hazmat storage area (Basin B)	Fifteen 55-gallon drums
Transformer Oil	Transformers and circuit	Transformers and circuit	Transformers and	Variable

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Material	Receiving Location	Handling Location	Storage Location	Quantity/Capacity
(mineral oil)	breakers outside the plan on east side	breakers are stationary equipment	circuit breakers are oil-filled stationary equipment on east side	
Turbine Oil	Hazmat storage area (Basin B)	At each Unit in the power plant	Hazmat storage area (Basin B)	Ten 55-gallon drums
Used Oils (lube oils, fuel oils)	East of Unit 4, near stack	East of Unit 4, near stack	East of Unit 4, near stack	600-gallon tank and up to six 55-gallon drums
Low-Volume Wastewater (LVW)	Two surge tanks at LVW WWTF	Wastewater system is permanent and stationary	Two surge tanks at LVW WWTF	Two 56,000-gallon tanks
Demineralizer Regenerant & Reverse Osmosis Membrane Cleaning Wastewater	One tank east of Unit 5	Tank is permanent and stationary	East of Unit 5, adjacent to reverse osmosis unit	One 43,750 gallon tank
Metal-Cleaning Wastewater (MCW)	Two collection tanks at LVW WWTF	Wastewater system is permanent and stationary	Two collection tanks at WWTF	Two 357,000-gallon tanks
Metal-Cleaning Wastewater (MCW)	Same as MCW above	MCW treatment facility east of switching yard	Same as Treated Wastewater below	6 treatment tanks from 735 to 121,830 gallons
Treated Wastewater	Two collection tanks at LVW WWTF	Wastewater system is permanent and stationary	Two collection tanks at WWTF	Two 95,000-gallon tanks
Sodium Hypochlorite	West side of plant on	West side of plant on	West side of plant on	Two 5,000-gallon tanks

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Material	Receiving Location	Handling Location	Storage Location	Quantity/Capacity
	cooling water deck	cooling water deck	cooling water deck	
Paints and Thinner	Hazmat storage area (Basin B)	Various locations inside and outside the plant	Hazmat storage area	200 gallons (mostly 1-gallon cans)
Ammonium Hydroxide	South Side of plant	South Side of plant	South Side of plant	Two 9,000-gallon tanks
Pilot Desalination Plant	North Side of plant	North Side of plant	North Side of plant	Ferric (III) Chloride (55 Gallons) Sodium Bisulfite (55 Gallons) Sodium Hypochlorite (55 Gallons) Sulfuric Acid (55 Gallons) Vitec 3000 (55 Gallons)
Carlsbad Aquafarm	North Side of plant	North Side of plant	North Side of plant	Chlorine Bleach (55 Gallons) Outboard motor oil (55 Gallons)

*Note: Hazardous materials generated on-site are discussed below under Waste Handling/Recycling.

1.4 POTENTIAL POLLUTANT SOURCES

Outside activities or operations that could affect ambient storm water quality at the Encina Power Station facility are mostly limited to maintenance activities, hazardous waste/materials storage, aboveground fuel storage, shipping and receiving, and dust/particulate generation.

Industrial Processes

Each major industrial process is described below in terms of the type, characteristics, and quantity of significant materials used in or resulting from the process. As this facility is solely used for generating electricity, it is not involved in any manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the electricity-generation process unless warranted by maintenance. It is important to note that most tanks, pipe ways, associated piping, valves, and other ancillary equipment capable of spillage, rupture, leakage, or other failure are protected by secondary containment structures. According to site interviews, each corresponding secondary containment unit provides enough capacity to hold 110 percent of the total tank volume plus the accumulation of rainfall from a 25-year, 24-hour-duration storm event.

Steam-Powered Generating Units

There are five steam-powered generating units located within the main Power Station building. These units can burn either natural gas or fuel oil as fuel. Fuel oil is used mainly as a backup fuel and, therefore, rarely is burned. Fuel oil is stored in the two tank farms located at the east and west farms of the facility. In addition, a displacement oil tank stores diesel oil.

Gas Turbine Generating Unit

A 20-MW gas turbine is located east of the main Power Station. This turbine burns natural gas or diesel oil and is used infrequently for generating additional electricity during peak-demand periods or for “black start” requirements. A small diesel tank (less than 50 gallons) is contained within turbine housing.

Wastewater Treatment Facilities

The Power Station has a wastewater collection facility, which also includes the low volume waste (LVW) on-line treatment system, and a metal cleaning wastewater (MCW) treatment facility. The LVW treatment facility is located in Basin B directly north of the switching yard. This facility consists of six aboveground industrial wastewater holding tanks, with capacities ranging from 56,000 gallons to 357,000 gallons, and two LVW oil/and sediment coalescers.

Station low volume wastewater is collected and routed through this facility. MCW are collected in tanks within the LVW facility prior to treatment. For treatment they are routed to the MCW treatment facility located east of the switching yard. Treated MCW is routed to two treated water holding tanks in the LVW facility for testing prior to discharge into the Power Station's outfall. The wastewater treatment facilities have secondary containment for the ASTs.

A double-walled tank located directly east of Unit 5 is used to collect and self neutralize low volume wastewater generated from the regeneration of the Station's demineralizer and reverse osmosis membrane cleanings. After neutralization, these wastewaters are routed to the LVW treatment facility for treatment and discharge into the Power Station's outfall.

Material and Waste Handling Storage Areas

Described below are the major areas associated with handling and storage of significant materials. Specific spill or leak prevention and response procedures are provided by the Spill Prevention Control and Countermeasures (SPCC) Plan and the Hazardous Material and Waste Contingency Plan. As noted above, most areas having the potential for spills, leaks, ruptures, or otherwise failure are equipped with structural secondary containment and adequate containment capacity.

Wastewater Treatment Facilities

Low volume wastewater and metal-cleaning wastewater streams are separated, collected, treated, and stored within these facilities. Wastewater discharge is in accordance with NPDES permit requirements at the LVW and MCW facilities.

Oil Recovery Area

The oil recovery area is located east of Unit 4 and north of the reverse osmosis unit. Various oils are recycled and reclaimed in the area.

Tank Farms

A total of seven ASTs store residual fuel oil in two separate locations at the Encina Station - the east and west tank farms. The total storage capacity of these tank farms is 1.7 million bbls. Each of the ASTs has a floating roof and is provided with secondary containment. Displacement oil used at the Power Station for fuel oil line purges and cutter stock is stored in an 8,100-bbl tank in the west tank farm.

Liquid Caustic Soda Storage

Liquid caustic soda is stored in two tanks. A 6,000-gallon tank is located on the east side of Unit 4 and a 4,000-gallon tank is located at the wastewater treatment facility. The caustic is used for regeneration of the demineralizer and in the wastewater treatment process.

Liquid Sulfuric Acid Storage

Liquid sulfuric acid is stored in two tanks. A 6,000-gallon tank is located on the east side of Unit 4 and a 900-gallon tank is located at the wastewater treatment facility. The acid is used for regeneration of the demineralizer and in the wastewater treatment process.

Fuel Oil Additive Storage

Calcium nitrate is used as a residual fuel oil additive. It is stored in a 6,500-gallon bulk tank east of Unit 5. The additive is injected into the fuel oil at each boiler to control stack exhaust gas pH.

Storeroom Building

Several miscellaneous hazardous materials required for Power Station operation and maintenance are stored in appropriate sections of the storeroom building (e.g., paints, cleaners, welding rods, spare parts).

Paint Shop

A small amount of various paints are held in flammable liquid lockers located in the paint shop.

Hazardous Material and Waste Storage

A storage area at the facility is dedicated to the storage of accumulated hazardous wastes and materials used exclusively by Cabrillo Power I LLC. The building contains both solid and liquid hazardous wastes and materials. The containers are segregated according to waste type (e.g., toxic solids, non-flammables, corrosives). Secondary containment at the building is provided.

Fuel Oil and Displacement Oil Loading/Unloading

Residual fuel oil is delivered to the Power Station from tankers or barges, which are moored directly offshore from the facility in the Pacific Ocean. A 20-inch submarine pipeline is used to transfer the residual oil from the tankers to storage tanks located at the Power Station. The ASTs are used to store the residual oil. Residual oil and displacement oil can be unloaded from the tankers to any of the ASTs or transferred from these tanks to vessels for

shipment. Oil is drawn from the ASTs and transferred to the Power Station for firing the boilers. A small cone-roofed tank of 8,100 bbls is used to store displacement oil for displacing the residual oil in the submarine pipeline. Heat exchangers and transfer pumps are located in the displacement oil tank berm. A pumping facility, located adjacent to Tank 5, is used to transfer oil from Tanks 4, 5 and 6 to the Power Station. The truck unloading containment area is designed to divert any spilled oil or accumulated runoff into the displacement oil tank containment area. Tank trucks are required to be attended during unloading. Standard Cabrillo Power I LLC protocol mandates that visual observation for sheens and other visible pollutants be conducted prior to draining all containments surrounding tanks and equipment. If necessary, laboratory analyses may be performed for suspected contaminants in this water before drainage is authorized.

Aqua Ammonia Storage and Unloading Area

Ammonium Hydroxide is used by the Selective Catalytic Reduction (SCR) NOx reduction system that is currently installed in boilers 1 through 5. The Ammonium Hydroxide solution used at the Power Station has a concentration of 19 percent and is stored in two 9,000-gallon steel tanks that are located on the south side of the property inside containment. The unloading area is also in containment.

Pilot Desalination Plant

A 50 gallon per minute (gpm) Poseidon Resources pilot plant to test the feasibility of desalination at Encina Power Station is located in the west parking lot just east of the guard shack. The system consists of filtration media, a reverse osmosis train, and a corrosion study. Cleaning and processing chemicals are stored on secondary container pallets near the system.

Dredge Onshore Maintenance Activities

The dredge activities at Encina require the dredge and support equipment to be maintained onshore (i.e., normal repairs, cleaning, painting, overhauls, equipment change outs, etc.).

Machine Shop

A Machine Shop is located in the north east corner of the facility and contains equipment used to support facility maintenance and operation. The machine shop includes electrically powered equipment, raw metal materials, and some lubricants. The machine shop is enclosed and protected from storm water flows.

Carlsbad Aquafarm

A commercial aqua farm establishment, Carlsbad Aquafarm, Inc., resides on the north shore of the Power Station discharge pond. Processing facilities are located onshore with

necessary chemicals stored in secondary containment. Growing facilities are floated in the outer basin of the Agua Hedionda Lagoon for the harvesting of shellfish, such as Mediterranean (Gallo) Mussel, Blonde Oyster, Oyster del Sol, and Golden Manila Clam. An evaluation of the bacterial effects of waterfowl related to aqua farm operations on the outer Agua Hedionda Lagoon is included in Appendix G.

Dust and Particulate Generating Activities

Industrial activities that may generate dust or particulates at the Encina Power Station are mostly associated with the Power Station exhaust stacks, gas turbines, and maintenance activities. Deposition of airborne particulates and dust occur within the facility's boundaries and generally follow a west-east distribution, which is consistent with the onshore-offshore wind patterns native to the area.

The Encina Power Station facility has been issued 11 Permits to Operate by the San Diego County Air Pollution Control District (SDAPCD). These permits have been issued for the following equipment: boilers, abrasive blasting area, metal parts coating station, emergency generator set, and dredging barge ICEs.

Significant Spills/Leaks

In accordance with the General Permit, any material or chemical spilled or leaked in significant quantities to storm water, or the release of any unauthorized non-storm water discharge, that has occurred since April 17, 1994 must be identified.

November 10 2008:

Ten to 15 gallons of vegetable oil EAL 224H spilled into the outer basin of Aqua Hedionda Lagoon when a hydraulic line on the dredge ladder broke during system pressurization. Notifications were made to National Response Corporation (NRC), the Office of Emergency Services (OES), the Regional Water Quality Control Board (RWQCB), Department of Environmental Health (DEH), California Department of Fish and Game (CDFG). Cleanup was initiated and containment boom deployed. No warnings or violations given by the U.S. Coast Guard (USCG).

September 16 2008:

Fifty gallons of residual fuel oil #6 spilled to ground due to failure of fuel transfer piping elbow. The piping was isolated, the spill contained and weld repairs were completed. Agencies notified: NRC, OES, NRC Environmental Services, USCG, CDFG, DEH.

February 24 2006:

Fifty gallons of residual fuel oil #6 spilled to ground, due to mechanical seal failure in East fuel oil tank farm pump pit. Pump valved out at 21:12 and flow stopped at 21:25. NRC cleaned up oil that was contained in the pump pit. State Emergency Response Commission was notified.

July 8 2002:

One gallon of hydraulic (vegetable oil) was released into Agua Hedionda Lagoon. An Anchor Scow used to set anchors and move vessels during dredging operations sank causing the oil sheen. The sheen was contained to a small part of the South end of the outer lagoon. The sheen was cleaned up by absorbent pads and was completely eliminated by 1730 on July 9, 2002.

July 4 2002:

An oil sheen was discovered in Agua Hedionda Lagoon. It was determined that the mineral oil came from off site through the storm water conveyance system. The oil was removed and the storm water conveyance was flushed and cleaned.

March 22, 2001

Ninety gallons of residual fuel oil was spilled as a result of maintenance operations. The fuel oil line was purged from the fuel oil line prior to maintenance; however a small amount of oil was left in the line, which was spilled when one of the flanges was removed. The spill was contained and cleaned up immediately after the incident occurred. The oil was high viscosity oil and, therefore, did not penetrate the soil. Required notifications to NRC and OES and courtesy notifications to CDFG, San Diego DEH and Carlsbad Fire Department were made.

March 15, 2000

Ninety gallons of residual fuel oil was spilled as a result of an underground pipe failing inside fuel oil tank containment. During routine inspection the operator saw oil coming to the surface. High pour point oil, therefore, no soil permeation. Required notifications to NRC and OES and courtesy notifications to CDFG, DEH and Carlsbad Fire Department were made.

November 24, 1998:

Commercial divers removed sand from the Under Sea Mooring hose string. A pin hole leak developed at end of hose releasing approx. 8 oz. of #2 diesel creating sheen on surface. Leak was stopped within 10 min. 12/4/98 the Barge Jovalon flushed the diesel out of piping,

without incident, in preparation of mooring overhaul during week of 12/15. All hoses & spool pieces were replaced.

November 14, 1997:

15-20 gallons of residual fuel oil found on valve platform. Concrete containment. Not reportable. Shift Supervisor did courtesy contact to NRC.

May 20, 1997:

1-2 gallons oil globs on return line heated up hidden oil from previous 4/2/97 incident. The oil globs got into storm drain, but stopped at the permanently placed boom at site drainage point. \$250.00 fine. Notification NRC, USCG, Aquafarm, CA DOHS, Hubbs Research, F&G.

May 4, 1997:

Sheen (estimated 1 teaspoon) at Dredge Vessel stem. It was vessel drive propulsion engine oil. Notified NRC, OES & USCG. \$250.00 fine NOV issued.

April 25, 1997:

Cooling water Bar Rack area Lube Oil 2 gallons leaked. 1 gal. on ground, 1 gal. in water. Notification to NRC, OES, RWQCB & USCG.

April 2, 1997:

Residual Fuel Oil approx. 100 gallons released to concrete (no material entered the water) from #1 & 2 Fuel Oil return line. Return line leak & 90% of oil contained on concrete slab/containment of small amount in soil. High pour point oil, therefore, no soil permeation. Required notification NRC, OES (required notification) & courtesy notification to F&G, DEH, USCG and EPA Region 9.

Non-storm Water Discharges

A major element of storm water NPDES permitting is the elimination of non-storm water discharges to the storm water collection system. The 1997 General Permit differs from the earlier 1992 General Permit in that certain non-storm water discharges are allowed provided that the non-storm water component of the discharge complies with the following:

- Local Regional Water Quality Control Board requirements.
- Local agency ordinances and/or requirements.

- BMPs are specifically included in the SWPPP to (1) prevent or reduce pollutants in non-storm water discharges, and (2) minimize the flow or volume of non-storm water discharges.

Regular, authorized non-storm water discharges occur at the Encina Power Station. The non-storm water sources and their frequency of occurrence are shown in Table 3:

Table 3: Non-Storm Water Discharges

Source	Frequency
Fire hydrant flushing	Every six months
Irrigation	Weekly schedule concentrated from April through October
Back flow preventer testing	Annually

In addition there are non-storm water sources at the Encina Power Station that are not scheduled and occur sporadically/infrequently. These sources of non-storm water are exempt per General Permit Section D and include:

- Discharges from fire-fighting activities;
- Potable water sources, including waterline flushings;
- Drinking fountain water;
- Uncontaminated compressor or air conditioner condensate;

During routine maintenance and servicing at the Encina facility, these discharges are sometimes allowed to drain to the ground because they do not pose a potential pollution problem for storm water. However, standard protocol at Cabrillo Power I LLC facilities is to minimize and otherwise prevent any non-storm water discharges to the ground. When these discharges do occur, they are infrequent, typically of low volume, and evaporate in a short time. In addition, these discharges either are from a potable water source supplied by the City of Carlsbad or are otherwise known not to contain substances that pose a threat to storm water quality.

The potential for storm water contamination at the Encina Power Station facility from non-storm water discharges was investigated in July 1997 as part of revising this SWPPP. The methods used to perform the investigation consisted of the following:

- Observation of storm water outfalls during dry weather and normal working hours.

- Inspection of outside areas for the presence of unidentified discharge pipes.
- Review of site plans to determine whether they matched current conditions.
- Identification of the potential drainage routes where spills or leaks could occur.

Soil Erosion

Approximately 10 percent of the Encina Power Station facility is occupied by impervious surfaces (i.e., buildings, and asphalt and concrete paving. The balance of the site is unpaved and consists of either dirt or gravel surfaces, natural vegetation or landscaping. Storm water from Basin A is discharged to the hillside above the middle lagoon and has the potential to erode the slope overtime.

Should the facility site undergo modifications in the future that will involve a high potential for significant soil erosion, appropriate measures to limit erosion will be identified and implemented in accordance with the principles presented in this plan.

1.5 ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

Table 4 presents a summary of all industrial activities at the Encina Power Station facility, potential pollutant sources, potential pollutants and BMPs used to control the pollutant. The outfalls and potential source areas listed in Table 4 are shown in Figure 2.

**STORM WATER POLLUTION PREVENTION PLAN
AND BEST MANAGEMENT PRACTICES PLAN**

Table 4. Assessment of Potential Pollution Sources and Corresponding Best Management Practices Summary

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Tank Farms	Storage and transfer of fuel oil, diesel oil, displacement oil and diesel fuel	<ul style="list-style-type: none"> Spills and leaks during delivery and transfer Leakage from ASTs Failure of roof drain hose 	#6 fuel oil; diesel displacement oil	<ul style="list-style-type: none"> Use of secondary containment around tank farm perimeter, as well as truck unloading areas Inspection of areas daily Visual inspection and/or laboratory analysis of samples taken in containment areas prior to storm water discharge Apply SPCC measures when applicable Perform regular inspections of fueling area Maintain spill kit in vicinity of areas in case of spill incident Provide employee training regarding proper fueling, cleanup and spill response techniques
Storeroom/ Warehouse	Handling, storage and delivery of supplies	Spills during delivery	Small quantities of various supplies	<ul style="list-style-type: none"> Apply SPCC measures when applicable Perform regular inspections of area Maintain spill kit in vicinity of area in case of spill incident Provide employee training regarding proper cleanup and spill response techniques
Equipment repair area	As needed repairs of various equipment	<ul style="list-style-type: none"> Metal shavings Paints Lubricating materials 	Small quantities of various supplies used in equipment maintenance	<ul style="list-style-type: none"> Train contractors using the facility's contractor safety notice program Encourage housekeeping during and after maintenance repairs Cover storm drains as necessary with mat during work near storm drains
Paint booth/shop	Parts and equipment painting	<ul style="list-style-type: none"> Spills/leaks of paint supplies Over spray from paint 	Paints, solvents and thinners	<ul style="list-style-type: none"> Use of secondary containment around paint supplies Use of dispenser drums with containment structures Keep containers covered and sealed Specialized cleaner for paint gun tips
Sandblasting shack	Sandblasting of parts and equipment	Particulate generated during sandblasting activities	abrasive blast material (i.e., lead, copper)	<ul style="list-style-type: none"> Use of bag house to capture particulates Daily cleanup of booth Prohibition of water in booth
Portable sandblasting	Sandblasting of permanent or large	Particulate generated during sandblasting	CARB approved abrasive blast	<ul style="list-style-type: none"> Use of temporary enclosures to capture particulates Use of CARB approved blast materials Daily cleanup of work area

**STORM WATER POLLUTION PREVENTION PLAN
AND BEST MANAGEMENT PRACTICES PLAN**

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
operations	structures	activities	material	<ul style="list-style-type: none"> • Cover storm drains as necessary
Satellite hazardous materials storage	Storage of hazardous materials and waste (e.g., waste oils)	leaks and spills	Various	<ul style="list-style-type: none"> • Use of secondary containment • Restricted access to personnel • Regular employee training • Regular inspections • Apply Hazardous Materials and Waste Contingency Plan when applicable • Maintain spill kit in vicinity of area in case of spill incident
Plant Maintenance shops	Welding/grinding materials	leaks and spills	Various	<ul style="list-style-type: none"> • Regular employee training • Daily housekeeping required
Wastewater Treatment Facilities	Wastewater treatment	Spills and leaks	metal cleaning waste	<ul style="list-style-type: none"> • Use of secondary containment • Use of alarms • Regular employee training • Use of SPCC plan regular inspections
Trash racks	Seaweed debris removal	Equipment leaks	oils and greases	<ul style="list-style-type: none"> • Regular maintenance of equipment
Hazardous materials and waste storage	Drum handling	residue on containers, leaks, spills	various	<ul style="list-style-type: none"> • Built in secondary containment • Use of mechanical drum handling tools • Inside storage when possible • Storm drain valve west of building closed except during rain • Inspected weekly • Apply Hazardous Materials and Waste Contingency Plan when applicable • Maintain spill kit in vicinity of area in case of spill incident
Transformers and switch yard	Transformer maintenance	leaks; maintenance activities	mineral oil (non-PCB)	<ul style="list-style-type: none"> • Regular equipment inspections • Personnel training • Alarms provided on sumps associated with transformer areas
Vehicle parking	Parking/driving	oil leaks	oil, antifreeze, gasoline	<ul style="list-style-type: none"> • Cleanup of significant stains • Spill cleanup practices
Recycle bins	Storage of waste products	leaching during rainstorms; leakage	metals shavings; oils	<ul style="list-style-type: none"> • Placement of roll-off bins away from storm drains • Regular housekeeping • Provide covers for bins as required

**STORM WATER POLLUTION PREVENTION PLAN
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Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle washing	not allowed	N/A	N/A	<ul style="list-style-type: none"> • N/A
Dredge onshore maintenance	Dredge maintenance, normal repairs, cleaning, painting	maintenance activities	paints, oils, metal shavings, abrasive blast materials	<ul style="list-style-type: none"> • Use of secondary containment • Daily housekeeping • Regular employee training • Provide covers for outdoor bins • Maintain drums on spill pallets
R O Skid	Repairs on installed equipment	maintenance activities	R O brine and product water	<ul style="list-style-type: none"> • Cover storm drains in the area with mats during maintenance activities
Ammonium Hydroxide	Delivery and Storage	Spills and leaks during delivery	Ammonium Hydroxide	<ul style="list-style-type: none"> • Use of secondary containment around perimeter of tanks, as well as truck unloading area • Inspection of areas two times per day • Visual inspection and/or laboratory analysis of samples taken in containment areas prior to storm water discharge • Apply SPCC measures when applicable • Provide employee training regarding proper truck unloading and spill response techniques
Machine Shop	Machining custom parts	Spills and leaks	metals shavings; oils	<ul style="list-style-type: none"> • Daily housekeeping • Regular employee training • Cleanup of significant stains • Spill cleanup practices • Maintain drums on spill pallets • Spill kit on-site
Pilot Desalination Plant	Sea water desalination	Spills and leaks	Sea water, potable water, chemicals	<ul style="list-style-type: none"> • Regular equipment inspections • Personnel training • Regular maintenance of equipment
Carlsbad Aquafarm	Shellfish harvesting and processing	Spills and leaks	Sea water, potable water, chemicals, oils, fecal coliform	<ul style="list-style-type: none"> • Regular equipment inspections • Personnel training • Regular maintenance of equipment • Bird excluders (spikes) on shellfish buoys, regularly maintained

As evidenced by the June 1997 storm water site inspection, the overall risk of contributing contaminants to storm water discharges through runoff posed by industrial activity at the Encina Power Station is considered low. The following section identifies the existing BMPs, as well as BMPs to potentially implement in the future.

1.6 STORM WATER BEST MANAGEMENT PRACTICES

The BMPs employed at the Encina Power Station can be segregated according to nonstructural controls and structural controls. Nonstructural controls generally are implemented by various personnel throughout the site, while structural controls involve a physically constructed barrier to contain potential pollutants. The following sections describe these BMPs.

Non-Structural BMPs

Non-structural BMPs or control measures include the following:

Good Housekeeping

Proper traditional "housekeeping" practices will be performed by maintenance staff so the facility is kept in a clean and orderly condition. This element of the storm water pollution prevention program is an ongoing task and is continually implemented to minimize the exposure of significant materials to storm water. Proper housekeeping practices include:

- Periodic cleanup and maximization of parts storage under roofed or covered areas.
- Sweeping of impervious surfaces.
- Proper disposal and rainfall protection techniques for spent paint cans, waste oils, etc.
- Maintenance of oil-absorbing materials in areas of potential spillage.
- Proper storage and rainfall protection techniques for potential contaminants.
- Brief employees and contractors on SWPPP efforts and potential storm water issues.

Preventive Maintenance

A preventive maintenance program involving inspection and maintenance of storm water management devices is in effect at the Encina Power Station facility. Inspection and

performance of preventive maintenance at the Encina Power Station facility will be conducted annually and on an as-needed basis.

Storm water management maintenance activities performed as part of this program include the following:

- Cleaning of accumulated debris from retention basins (i.e., fuel oil pump pits, sump pump areas, conveyance structures and outfalls).
- Clearing of debris from grate drains, catch basins, diversion ditches, and drainage pipes.
- Maintenance and inspection of secondary containment structures and associated drain valves.
- Periodic inspection and maintenance of pumping equipment as needed.
- Inspection and maintenance of rainfall protection coverings for waste storage bins and receptacles.

Spill Response

The prevention of and response to spills at the Encina Power Station facility are performed according to the facility's Hazardous Material and Waste Contingency Plan and Emergency Procedures, as well as the SPCC and other response or contingency plans. In addition to these plans, other considerations regarding the identification of potential spills areas, procedures for cleaning up spills, and their potential drainage points are necessary to minimize storm water contamination.

Emergency cleanup practices at the Encina Power Station facility include the availability of spill kits and emergency collection devices or containers at strategic locations around the facility, particularly where the above-mentioned spill potentials exist. Typical components of a spill cleanup kit include, but are not limited to, dry absorbents such as pads, socks, mops, absorbing clays, portable booms or diverting structures, and appropriate personal protective equipment (PPE). These materials are maintained in clearly labeled containers at various locations around the site and are accessible to all employees.

Material Handling and Storage

Similar to the procedures for emergency spill response, material handling and storage of potentially contaminating substances is conducted in strict accordance with various plans, policies, and other associated control documents.

Employee Training

The training program for the Encina Power Station facility's Pollution Prevention Team focuses on proper preparation and response to storm events. Team members undergo storm water management training for all areas and operations at this facility. Training updates are conducted annually. New employees are provided with a program summary of storm water management practices as part of their employment orientation.

The topics addressed in the annual training program include updates to storm water pollution prevention regulations, spill response, material management practices, storm water BMPs, good housekeeping, inspection protocol and consequences of noncompliance.

Waste Handling/Recycling

The following types of hazardous waste are generated at the Encina facility.

- Oil-contaminated solid waste – e.g., oily rags, oil-contaminated dirt and/or absorbent (generated by routine maintenance/cleanup of oil leaks). This waste is held in drums or a hazardous waste bin until disposal is arranged.
- Asbestos – solid asbestos-containing insulation and lagging wastes are removed during maintenance and replaced with non-asbestos insulation. The asbestos waste is double-bagged and held at the hazardous waste bin until disposal is arranged.
- Wastewater treatment facility filter cake – the wastewater treatment facility produces solid wastes containing low concentrations of metals that are a by-product of boiler acid cleanings and fireside washes. A special hazardous waste bin is brought in on an as-needed basis for filter cake disposal.
- Empty product drums – Several 55-gallon drums from various vendors are generated through site activities. These empty drums either are returned to the vendor or are sent to a licensed drum recycler. In the interim, the drums are held at the hazardous waste building.
- Boiler fireside/soot hopper solid wastes – these wastes may contain some metals in low concentrations. They normally are removed during overhauls and are placed in hazardous waste drums or bins brought in for these jobs. They are disposed of on an as-needed basis.
- Various universal wastes – fluorescent light bulbs, alkaline batteries, lead acid batteries, aerosol cans, electronic waste

Each of these materials is managed in an environmentally conscientious manner in accordance with standard Power Station protocol and in accordance with federal, state and local regulations.

Recordkeeping and Internal Reporting

The maintenance and storage of environmental records is conducted in accordance with this SWPPP and other environmental management programs exercised by Power Station. These procedures ensure that all records of inspections, spills, maintenance activities, corrective actions, and visual observations are developed, retained, and provided, as necessary, to the appropriate facility personnel. Appropriate company communication and environmental records associated with the storm water management program can be found in the appendices of this document.

Erosion Control and Site Stabilization

Because approximately 90 percent of the Encina Power Station facility consists of pervious surfaces, sediment and erosion prevention and control measures have been implemented to maximize site stabilization including grading, stabilizing ground cover (e.g. gravel), and compaction. Should the facility site undergo modifications in the future that will involve a high potential for significant soil erosion, appropriate measures to limit erosion will be identified and implemented.

Inspections

Two types of inspections are performed at the Encina Power Station facility as part of this SWPPP: an annual formal compliance evaluation and continuous visual inspections performed by employees. The compliance evaluation is conducted once a year by the Environmental Specialist or Laboratory Technician to verify that the description of potential pollutant sources is accurate, that the drainage map has been updated or otherwise modified to reflect current conditions; and that the controls to reduce pollutants in storm water discharges associated with industrial activity identified in the SWPPP are being implemented and are adequate. Records documenting significant observations made during the site inspection and corrective actions resulting from the inspection are retained as part of this SWPPP for 5 years.

In addition to this annual inspection, visual inspections are conducted by facility personnel who are trained to observe evidence of, or the potential for, pollutants to enter the drainage system from equipment, or materials handling and storage areas. If only minor corrective actions are needed, they are performed immediately and not reported. If more extensive actions are required, the shift supervisor is to be notified, and he or she in turn notifies the Plant Manager. Records of visual inspections and corrective actions also are

retained for 5 years. Guidelines used in these informal inspections are presented in the Table 5, as well as in the multiple log forms provided in Appendix A.

Non-storm water discharge inspections and observations are performed quarterly at all potential discharge locations and containment areas. In addition, storm water discharge visual observations are performed at each discharge and run-on location (Figure 2) for at least two storms per year to detect indications of contaminants. If indications of contaminants exist, the source is investigated and action taken to reduce pollutants in the discharge.

Quality Assurance

The procedures employed at the Encina Power Plant facility to ensure that all elements of this SWPPP and Monitoring Program are adequately conducted include:

- Monitoring program quality assurance/quality control activities (details provided in Appendix D).
- Recordkeeping practices (see “Recordkeeping and Internal Reporting” Section above)
- Employee training programs (see “Employee Training” Section above)
- Regular site inspections (see “Inspection” Section above)

Structural BMPs

In addition to the non-structural BMPs identified above, specific structural BMPs are implemented at the Encina Power Station facility. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and other non-authorized discharges. These are described below.

Overhead Coverage

Structures that provide overhead, horizontal coverage of significant materials in order to prevent contact with storm water are in use at the following areas;

- Machine shop
- Maintenance Shop
- Paint Area
- Storeroom/Warehouse
- Paint Booth
- Sandblasting Shack

Secondary Containment Structures

Structural containment is provided for all tanks and most areas throughout the facility that are prone to potential spills, leaks, or ruptures. In areas where significant materials are stored outside without rainfall protection, secondary containment in these areas provides for the largest single container or tank and runoff from a 24-hour, 25-year return period storm. All secondary containment structures are outfitted with manually controlled discharge valves, warning signs, and remained locked at all times. Inspection and maintenance procedures are tailored to maintain these BMPs in meticulous condition and strictly regulate the authority for any releases.

Hazardous Waste/Materials Storage

This facility is sloped to contain spills. Management practices for this less-than-90-day storage facility mandates that significant precautions be employed to mitigate leaks or spills, and that the potential for release to the storm water conveyance system is mitigated.

Spill Kits

Equipment for emergency spill response is provided via spill kits situated in strategic locations throughout the facility. These are also supplied with PPE to safeguard response personnel when using absorbents and emergency response equipment. Additionally a containment berm is permanently deployed at the discharge point from Basin B.

Potential BMP Developments

In addition to the existing material management techniques employed at the Power Station facility, other potential BMPs may be appropriate in the future as conditions warrant. If required, the BMPs identified below, which are based on 1997 observations, would serve to further enhance storm water quality. As such, the implementation of these BMPs is contingent on the effectiveness of existing storm water controls.

The results of future annual inspections will determine whether the BMP developments below are necessary based onsite conditions and whether they can be accommodated without significant fiscal and staff-related impacts.

1. All drain inlets should be checked, cleared of accumulated debris, and maintained to ensure that significant debris buildup does not occur.
2. Sand bags or other erosion control devices will be placed in areas subject to heavy debris buildup as appropriate.
3. Periodically remove landscaping waste piles in Basin B (H-6) and control upgradient erosion with sand bags to minimize sediment buildup in the wastewater treatment plant area.

4. Remove/clean areas where minor spills have occurred (H-16) and areas showing spill/leakage and or stains (B-18). Avoid outside spray painting.
5. Minimize storage of waste drums outside maintenance shop (B-20) and conduct routine dry sweeping and vacuuming to collect welding/other particulates.
6. Provide “soft” berming, sand bags, telephone poles, or other containment devices around the dredging operation area and adjacent to the lay down area to control erosion/sediment dispersion (B-13 through B-18; C-18). Provide a portable sandbox or other suitable method to collect welding slag, cutting debris and spent welding rods where such outside activities are conducted.
7. Grated drain inlets that are situated within unpaved, dirt areas show signs of minor erosion and the subsequent introduction of sediments to the storm water conveyance system. For these areas, sand bags or suitable alternatives are suggested to reduce the velocity of inflow at the grate and provide a physical barrier for minimizing solids input. Flow dissipaters, such as rock/gravel diffuser systems, could also be employed at a number of locations throughout the site, primarily at offshoot diversion structures from driveways.
8. Brief contractors or other temporary onsite personnel on the need to consolidate or remove unnecessary equipment and waste materials from District Operations lay down area in northeast section of Basin B.
9. The employee parking area should be cleaned on an as needed basis using dry methods (absorbents and subsequent sweeping and collection) to eliminate accumulated oils, grease, and other automobile contaminants.

1.7 ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

In accordance with Section §A.9 of the General Permit, a comprehensive site compliance evaluation must be conducted at least once per year. Evaluations are to be conducted within 8 to 16 months of each other. A formal site inspection shall be conducted annually by a member of the Pollution Prevention Team to verify that the controls to reduce pollutants in storm water discharges identified in this SWPPP are adequate and properly implemented. If it is determined that existing control measures are not adequate, additional control measures will be recommended and implemented within 90 days of the evaluation.

The site evaluation will include a review of all visual observation records, inspection records, and sampling and analysis records. Site inspection and corrective action records produced under this program shall be retained for 5 years and should be archived in the appendix of this document. Inspections will be used to verify that best management practices are in place, including structural and nonstructural controls. Recommendation of additional or modifications to storm water controls, evaluation of good housekeeping techniques, and verification of erosion prevention will also be included as part of the annual

compliance evaluation. A site inspection log sheet is shown as Form I in Appendix A. The annual review of the SWPPP and changes made as a result of the annual compliance evaluation should be recorded on Form II (Appendix A).

The Encina Power Station SWPPP will be reviewed and compliance with it determined based on the annual compliance evaluation. If conditions throughout the facility comply with the SWPPP, a certification to that effect will be signed by the Plant Manager or other principal executive officer (see Appendix A, Form III). Should management status of the facility change either by retirement, promotion, or otherwise, a new authorization must be attached to the SWPPP prior to submittal of any reports, certifications, or information signed by the person responsible.

Form I, Form II, and the signed certification constitute all of the required elements of the Evaluation Report outlined in Section A9d of the General Permit. The Evaluation Report shall be submitted as part of the Annual Report.

SECTION 2 STORM WATER MONITORING PROGRAM AND REPORTING REQUIREMENTS

This storm water sampling plan and monitoring program has been developed in accordance with the State Water Resources Control Board's Storm Water Monitoring and Reporting Requirements as stated in Section B of the Industrial Activities Storm Water General Permit published April 17, 1997. The Encina Power Station facility has complied with state storm water monitoring and reporting requirements since the date of enactment of the first General Permit (No. 91-013-DWQ; amended on September 1992).

The goals and objectives of the monitoring program for Cabrillo Power I LLC Encina Power Station facility are to:

- Provide visual observation methods and guidelines for dry- and wet-weather inspections.
- Provide guidelines for complying with the discharge prohibitions specified in the General Permit.
- Ensure practices at the facility to control pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.
- Aid in the implementation and revision of the SWPPP.
- Measure the effectiveness of BMPs in removing or reducing pollutants in storm water discharge and authorized non-storm water discharges.

The storm water monitoring program consists of three main elements:

- Non-storm Water Discharge Visual Observations
- Storm Water Discharge Visual Observations
- Sampling and Analysis

Each of these elements is described below. Results of these monitoring elements must be documented in the Annual Report submitted to the RWQCB due by July 1 of each year (refer to Appendix B for Annual Reports). All monitoring records must be maintained for a period of 5 years.

Conducting this monitoring program involves the collection of information and storage of records pertaining to site inspections, field observations, weather conditions, compliance evaluations, and other applicable information. Several forms have been developed specifically for this program to assist in its implementation. Therefore, to simplify the presentation of this material, all examples of inspection, observation, and other log forms are presented in

Appendix A. The forms presented in Appendix A may be modified to suit the changing needs of the facility as appropriate.

An overview to the duties and responsibilities of personnel for each storm water monitoring program element are summarized in Table 1, presented in the early sections of this SWPPP.

2.1 NON-STORM WATER DISCHARGE - VISUAL OBSERVATIONS

In accordance with Section B.3 of the General Permit, “facility operators” must visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges and must visually observe the facility’s authorized non-storm water discharges and their sources. These visual observations must occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours. Quarterly visual observations must be conducted in each of the following periods: January-March, April-June, July-September; and October-December. The quarterly visual observations must be conducted within 6 to 18 weeks of each other.

The visual observations made must document the presence of any discolorations, stains, odors, floating materials, etc. as well as the source of any discharge. Records must be maintained of (1) the visual observation dates, (2) locations observed, (3) observations, and (4) response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

For areas that are detected to have offsite run-on, the source of run-on should be traced to the source and corrective action taken. Refer to “Non-storm Water Discharges” presented earlier in the Storm Water Pollution Plan section for allowable non-storm water discharges. Those found to be of an unauthorized nature should be immediately eliminated. Adjacent property owners, or operators of equipment on adjacent property that cause non-storm water discharges to flow onsite should be immediately notified to halt such activities or implement corrective measures. Should initial attempts to resolve such offsite run-on conditions, the San Diego RWQCB can be notified if appropriate.

A site inspection log sheet is shown as Form IV in Appendix A. The annual review of the SWPPP and changes made as a result of the annual site inspection should be recorded on Form II (Appendix A).

2.2 STORM WATER DISCHARGE - VISUAL OBSERVATIONS

Facility operators must visually observe storm water discharges from one storm event per month between October 1 and May 30, during which wet weather is expected. The visual observations must occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water must occur at the time of the release. Visual

observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three working days without storm water discharges and that occur during scheduled facility operating hours. The three working days may be separated by non-working days provided no storm water discharge occurs during the non-working days. The visual observations must document the presence of any floating or suspended material, oil and grease, discolorations, turbidity, odor and source of any pollutants.

Records must be maintained of (1) the visual observation dates, (2) locations observed, (3) observations, and (4) response taken to reduce or prevent pollutants in storm water discharges.

Guidelines for conducting the visual observations are presented on Form VI in Appendix A. The annual review of the SWPPP and changes made as a result of the annual site inspection should be recorded on Form II (Appendix A).

2.3 WET-SEASON SAMPLING AND ANALYSIS

This section summarizes the wet-season sampling program, including when sampling must occur, the locations to be sampled, analytical requirements, and includes a list of constituents to be analyzed.

Sampling locations (Figure 2) were selected at the Encina facility when the initial SWPPP was developed (Geocon, 1992). Sampling points were selected to sufficiently represent industrial characteristics upstream and avoid repetition in redundant sampling. A total of five representative wet-weather sampling points were chosen to characterize the Encina Power Station facility. The analytical parameters for each sampling location are based on the industrial activity occurring in each of the defined basins.

Wet-Season Sampling Criteria

The Encina Power Station facility is required to collect samples and perform visual observations during daylight hours only if significant storm water discharges commence during scheduled facility operating hours.

The sampling requirements for wet-season conditions are as follows:

- Samples of storm water runoff must be collected from the five storm water discharge sampling locations and analyzed from the first storm event of the “wet season” and at least one other storm event in the wet season. Facility personnel that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and must explain in the Annual Report why the first storm event was not sampled.
- A minimum of three working days of dry weather must have elapsed from the end of the previous rainfall event to collect a valid storm water runoff sample. The three

working days may be separated by non-working days provided no storm water discharge occurs during the non-working days.

- A grab sample must be taken during the first hour of the discharge. The intent of the grab sample is to collect runoff during the initial flush. If obtaining a grab sample during the first hour is impracticable, the grab sample can be taken as soon as practicable thereafter. An explanation must be provided in the annual monitoring reports as to why the grab sample could not be taken in the first hour of rainfall. (See exemption criteria below.)
- Sampling of stored or contained storm water must occur at the time the stored or contained storm water is released.
- Storm water discharge samples may be collected either manually or with automatic water sampling devices. A grab sample will be collected from representative locations of each storm water outfall during a rainfall event.

Sample Analyses

As stated in §B.5.c. of the General Permit, each wet-season storm water sample shall be analyzed for the following parameters:

1. Total suspended solids (TSS), pH, specific conductance, and total organic carbon (TOC). Oil and grease may be substituted for TOC; and
2. Toxic chemicals and other pollutants that are likely to be present in storm water discharge in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and
3. Other analytical parameters are listed in Table D (i.e., specific to the industry and in accordance with the Standard Industrial Classification (SIC) code associated with that industry). For the Encina Power Station, the applicable SIC code is 4911 ("Steam Electric Power Generating Facilities"), which mandates an analysis for iron in storm water samples. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of the General Permit and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation of the facility's industrial activities, potential pollutant sources and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.

As specified by General Permit §B.6, facilities subject to federal storm water effluent limitations must also collect and analyze two storm water samples for any pollutant specified by 40 CFR Subchapter N. Based on recent discussion with the Region 9 of the Environmental Protection Agency, Steam Electric Power Generating facilities are subject to additional storm water sampling requirements (and subsequent requirements of General Permit §B.6) if storm water runoff from coal piles exists and/or the facility is currently subject to federal storm water effluent limits (E. Bromley, personal communication 1997). From the results of the 1997 Encina Power Station site audit, the interpretation of 40 CFR 423, and discussions with federal regulators, this facility is not subject to General Permit §B.6. A copy of 40 CFR 423 has been included in Appendix C as support and reference material.

Thus, storm water samples collected at the Encina Power Station must be analyzed for:

- pH
- TSS
- Specific conductance
- Oil and grease
- Iron (General Permit Table D)

Wet-Weather Sampling Locations

Storm water permit regulations require the collection of runoff samples from all industrial areas where storm water is discharged that represent the quality and quantity of the facility's storm water discharges from the storm event (General Permit §B.7.). However, if a facility discharges storm water at multiple locations, the discharger may sample a reduced number of locations if different locations are substantially identical, or, in the alternative, may collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the Annual Report.

If the facility's storm water discharges are commingled with run-on from surrounding areas the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

The locations for wet-weather sampling designated below are areas that are associated with storm water runoff, which have the potential to contain pollutants:

Basin A: The storm drain inlet depicted as A-1 on Figure 2. East tank farm drainage goes to Basin A and is sampled at location A-2 prior to discharge which may be after a storm event has concluded.

Basin B: The outlet to the drainage channel depicted as B-1 contains storm water from the area adjacent to the southeast portion of the Power Station and from off site. The sample location is shown on Figure 2.

Basin C: One of the three locking inlets located in the fuel tank farm shown as C-1, C-2, and C-3 on Figure 2. Samples will only be collected from these locations prior to opening the locked valves, which may be after the storm event has concluded.

Basin D: This basin covers the Power Station and surrounding area and storm water discharge from this basin are covered under a separate NPDES permit. A sample will be collected from the inlet depicted as D-1 on Figure 2.

Basin E: Basin E contains the employee parking, administrative building and maintenance building. This basin is exempt under the current regulations and a sample will not be collected from Basin E.

Basin F: Basin F consists of the dredge dock structure, an access road, and desalination pilot project. A Sample will be collected at location F-1 as shown on Figure 2.

Refer to Figure 2 for graphic depictions of these sampling locations and to Appendix D for specific procedures to follow when sampling.

Visual Observation and Sample Collection Exemptions

In accordance with General Permit §B.8., the following exceptions to the mandatory visual observation and sample collection requirements are allowed:

1. A facility operator is not required to collect a sample and conduct visual observations when:
 - Dangerous weather conditions exist, such as flooding, electrical storm, etc.
 - Storm water discharges begin after scheduled facility operating hours.
 - Storm water discharges are not preceded by three working days without discharge.
 - Storm water discharges do not occur during daylight hours.
2. A facility operator may conduct visual observations and sample collection more than 1 hour after discharge begins if the facility operator determines that the objectives of the observation and sampling program will be better satisfied.

If any of these exceptions are employed, then an explanation for the exception must be provided in the Annual Report.

Monitoring Methods

The methods employed for the monitoring program have been selected to satisfy storm water pollution control objectives and to provide observation and sampling data from each storm water basin on the site. The rationale and description of the visual observation methods, sampling methods, locations, and frequency are described in the protocols above. Additional details including analytical methods and corresponding method detection limits used to analyze pollutants in storm water discharges is presented in Appendix D.

All monitoring methods described in this plan include, incorporate, or reference the following requirements:

- All sampling and sample preservation must be in accordance with the current edition of “Standard Methods for the Examination of Water and Wastewater” (American Public Health Association).
- All monitoring instruments and equipment must be calibrated and maintained in accordance with the manufacturer’s specifications to ensure accurate measurements.
- All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless otherwise specified by the General Permit or the Regional Board.
- All metals must be reported as total metals.
- All laboratory analyses must be conducted at a laboratory certified for such analyses by the State Department of Health Services (with the exception of analyses conducted by facility operators whose staff is properly qualified to perform the test procedures).

Sampling and Analysis Exemptions and Reductions

In accordance with §B.12.b. of the General Permit, a facility operator may reduce the number of sampling events required to be sampled for the remaining term of the General Permit if certification of the following conditions is provided:

1. Samples have been collected and analyzed from a minimum of six storm events from all required drainage areas;
2. All prohibited non-storm water discharges have been eliminated or otherwise permitted;
3. The facility has been in compliance with the terms of the General Permit for the previous two years;
4. The facility’s storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and

STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

5. Conditions (2), (3) and (4) above are expected to remain in effect for a minimum of one year after filing the certification.

Facility operators must collect and analyze samples from two additional storm events during the remaining term of this General Permit in accordance with Table 4 below. Samples must be collected during the first storm event of the wet season. If samples cannot be collected during the first storm event of the wet season, samples must be collected from another storm event during the same wet season. If samples cannot be collected in the wet season, must collect the samples from another storm event in the next season. The annual report must include an explanation of any sampling that could not be performed during the wet season.

Table 5. Reduced Monitoring Sampling Schedule

Facility Operator Filing Sampling Reduction Certification By	Samples Shall be Collected and Analyzed in these Wet Seasons	
	Sample 1	Sample 2
September 1, 1997	October 1, 1997 - May 31, 1998	October 1, 1999 - May 31, 2000
September 1, 1998	October 1, 1998 - May 31, 1999	October 1, 2000 - May 31, 2001
September 1, 1999	October 1, 1999 - May 31, 2000	October 1, 2001 - May 31, 2002
September 1, 2000	October 1, 2000 - May 31, 2001	October 1, 2002 - May 31, 2003
September 1, 2001	October 1, 2001 - May 31, 2002	October 1, 2003 - May 31, 2004
September 1, 2002	October 1, 2002 - May 31, 2003	October 1, 2004 - May 31, 2005
September 1, 2003	October 1, 2001 - May 31, 2004	October 1, 2003 - May 31, 2006
September 1, 2004	October 1, 2001 - May 31, 2005	October 1, 2003 - May 31, 2007
September 1, 2005	October 1, 2001 - May 31, 2006	October 1, 2003 - May 31, 2008
September 1, 2006	October 1, 2001 - May 31, 2007	October 1, 2003 - May 31, 2009
September 1, 2007	October 1, 2001 - May 31, 2008	October 1, 2003 - May 31, 2010
September 1, 2008	October 1, 2001 - May 31, 2009	October 1, 2003 - May 31, 2011
September 1, 2009	October 1, 2001 - May 31, 2010	October 1, 2003 - May 31, 2012
September 1, 2010	October 1, 2001 - May 31, 2011	October 1, 2003 - May 31, 2013
September 1, 2011	October 1, 2001 - May 31, 2012	October 1, 2003 - May 31, 2014
September 1, 2012	October 1, 2001 - May 31, 2013	October 1, 2003 - May 31, 2015

Alternative Monitoring Procedures

Alternative monitoring procedures to those presented above are allowed (e.g., composite sampling) providing that the procedures meet monitoring program objectives and the Regional Board has reviewed the proposed procedures and justification and has approved the alternative plan. The alternative monitoring program must be submitted for approval to:

San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123
(858) 467-2952

2.4 RECORDS

Detailed records must be maintained to provide quality assurance/quality control (QA/QC) for a storm water monitoring program. Records of all storm water monitoring information and copies of all reports required by the General Permit must be retained for a minimum of 5 years from the date of the observation, measurement, or report. These records must include:

- Date, place, time, and individual(s) who performed the site inspections, sampling, visual observations and/or measurements, and if appropriate, sampling data;
- Date, time, and individual(s) who performed the chemical analyses; if appropriate;
- Analytical techniques or methods used, method detection limits, and the results of such analyses; if appropriate;
- QA/QC information;
- Non-storm water discharge inspections and visual observations and storm water discharge visual observation records;
- Visual observation and sample collection exception records;
- All calibration and maintenance records of onsite instruments used;
- All sampling and analysis exemption and reduction certifications and supporting documentation;
- The records of any corrective actions and follow-up activities that resulted from the visual observations.

The majority of this information will be archived in field logs, and other supporting information documents.

Originals of individual field observation logs, noncompliance reports, annual reports, and other pertinent information should be archived in this SWPPP and maintained by the Encina Power Station facility's Pollution Prevention Team. The Pollution Prevention Team office will serve as a central record keeping location for all storm water management procedures that were followed.

2.5 ANNUAL REPORT

An annual report must be submitted by July 1 of each year to the Executive Officer of the San Diego Regional Board. It is recommended that preparation, collation of support materials, and technical evaluation of results commence no later than six weeks prior to the due date.

The report will include a summary of visual observations and any sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report, information regarding exceptions to visual observations and sample collections throughout the year, any required records, and the method detection limit of each analytical parameter. Annual Reports should be archived in Appendix B.

The Annual Report will be signed and certified in accordance with the certification statement below.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

All records shall be retained on site for a period of at least five years, by a member of the Pollution Prevention Team.

SECTION 3 REFERENCES

Bromley, Eugene. 1997. Storm water coordinator for EPA Region 9. Personal communication with Jack Stoecker of Brown and Caldwell, July 10.

Geocon Environmental Consultants. 1992. Encina Facility: SWPPP, Monitoring Program, Records, October.

NOAA (National Ocean and Atmospheric Administration). 1991. Climatological Data, Annual Summary, California, 1991. Volume 95, number 13.

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

APPENDIX H